

ABSTRACT

A hot-gas blowing fan suitable for recirculation of fuel in a solid oxide fuel cell is presented, which comprises a completely gas-tight sealing means and a cooling means using air and which is of a simple structure without employing any utility other than a power source.

A completely gas-tight sealing means is formed by disposing a non-magnetic partition wall 11 in a clearance between a fan shaft side magnetic coupling 9 and a motor shaft side magnetic coupling 10 so that the non-magnetic partition wall 11 and a casing 12 hermetically seal a space surrounding a rotating shaft 6 from the outer field, and an air cooling means is constituted by a heat receiving portion 28, a heat transporting portion 29 and an air-cooling/radiating portion 30.